

CLAIMS

1. A composite superconducting tape comprising a multiplicity of stacked and diffusion-bonded superconducting tapes and in which all elongate components extend longitudinally.
- 5 2. A composite superconducting tape according to claim 1 consisting substantially solely of the constituent superconductor tapes.
3. A composite superconducting tape according to claim 1 comprising a compatible metal tape on at least one exposed major surface.
4. A composite superconducting tape according to claim 3 in which the said metal
10 tape is silver and functions to establish a thickness of silver of at least 10 μm between its own exposed surface and any superconductive filament.
5. A composite superconductor tape according to claim 3 or claim 4 having compatible metal tapes of different strengths on its two exposed major surfaces.
6. A composite superconducting tape according to any one of claims 3 to 5 in which
15 the constituent tapes are stacked in at least two parallel stacks.
7. A composite superconducting tape substantially as herein described with reference to any one of the embodiments of the invention illustrated in the accompanying drawings.
8. A method of making a composite superconducting tape, the method comprising
20 the steps of:
 - stacking a multiplicity of constituent monofilamentary or multifilamentary superconducting tapes together;
 - heat-treating the stack of superconducting tapes to promote diffusion bonding;
 - and
 - 25 rolling the diffusion-bonded stack.
9. A method according to claim 8 comprising adding a compatible metal tape to at least one end of the stack.
10. A method according to claim 8 comprising adding metal tapes of different strengths to the opposite ends of the stack.
- 30 11. A method according to any one of claims 8 to 10 comprising assembling the constituent tapes in at least two parallel stacks.

12. A method of making a multifilamentary superconducting tape substantially as herein described with reference to any one of the embodiments of the invention disclosed in the accompanying drawings.